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# NEW AUSTRALIAN FISHES. PART 19. A NEW SPECIES OF *LEPIDOPERCA* (SERRANIDAE)

By Clive D. Roberts

Department of Zoology, Victoria University of Wellington,
Private Bag, Wellington, New Zealand

## Abstract

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*Lepidoperca filamenta* sp. nov. is described from 15 specimens collected off southern and south-western Australia. It can be distinguished by dark blotches on the anterior base of soft dorsal, anterior soft anal and pectoral fins, and a lunate caudal fin.

## Introduction

Part of an ongoing study (Roberts, in prep.) on the taxonomy of anthiine serranids of the genus *Lepidoperca* Regan has focussed on the orange perches of Australia and New Zealand currently referred to the species *L. pulchella* Waite. It is now apparent that at least four species are represented in the complex. The purpose of this paper is to name and diagnose a new species belonging to this complex from southern and south-western Australia.

Counts and measurements (to the nearest 0.1 mm with dial calipers) were made following the methods of Hubbs and Lagler (1964). Counts of scale rows exclude the small, often irregular scales sheathing the fin bases; the last ray of the dorsal and anal fin usually branches to its base and was counted as one ray; fin ray counts were confirmed from radiographs; lengths of specimens are all standard lengths unless otherwise stated. Standard length and upper jaw length were measured from the anterior median point on the upper lip; bony orbit diameter is the horizontal distance between bony margins; length of dorsal lobe of caudal fin is the oblique distance from the base of the shortest caudal ray to the distal tip of the longest dorsal caudal ray.

Abbreviations are as follows: Australian Museum, Sydney (AMS); Western Australian Museum, Perth (WAM); standard length (SL); total length (TL); head length (HL).

## **Lepidoperca filamenta** sp. nov.

*Anthias pulchellus pulchellus*.–Glover & Branden, 1978: 57, fig. 3, South Australia, off Port Lincoln (not Waite).

*Material examined.* Holotype: Western Australia, west of Eucla, Great Australian Bight (32°20'S, 128°00'E), trawled 128-200 m depth, F.I.V. "Endeavour", Mar 1912, AMS I.12339 (116.4 mm SL, 165.5 mm TL).

Paratypes: Western Australia, type locality, 14 specimens: AMS E.2356 (129.0 mm), AMS E.2357 (134.5 mm); AMS E.2358 (128.5 mm), AMS E.2359 (127.4 mm), AMS E.2360 (128.0 mm), AMS E.2361 (128.0 mm), AMS I.12335 (126.5 mm), AMS I.12336 (124.8 mm), AMS I.12337 (133.0 mm), AMS I.12338 (132.1 mm), AMS I.12340 (119.0 mm). Between Cape Naturaliste and Geraldton, trawled 137-220 m depth, F.I.V. "Endeavour", 1912, AMS E.2489 (103.0 mm). c. 150 km south-west of Eucla, Great Australian Bight (33°17'S, 128°32'E), trawled, depth unknown, F.V. "Orsino", 21 Apr 1978 WAM P.26804-001 (106.9-127.4 mm).

*Diagnosis.* Dorsal fin rays X,16-17 (X,17 in holotype); anal fin rays III, 8; pectoral fin rays 15; pored lateral line scales 39-43 (41); upper transverse scalc rows 4, lower transverse scale rows 12-14 (14); gill rakers 9-10+24-27=33-37 (9+26=35). Upper jaw length 2.08-2.43 (2.08) in HL; maxilla reaching to below middle of pupil. Caudal fin lunate, its dorsal lobe 0.83-1.10 (0.83) in HL. Pelvic fin long, 2.44-2.90 (2.66) in SL. Basal part of spinous dorsal fin scaled; axil of pectoral fin scaled. Large, dark blotch on anterior of soft dorsal fin; a small dark blotch at centre of pectoral fin and on anterior of soft anal fin.

*Etymology.* From the latin *filum* (thread) and -

*mentum* (forming) refering to the long filamentous rays of the caudal fin lobes.

*Distribution.* Coastal waters of southern and south-west Australia at depths of 128-220 m.

*Remarks. Lepidoperca filamenta* can be distinguished from its congeners, except *L. pulchella* and *L. occidentalis* Whitley, by a large dark blotch on the anterior base of the soft dorsal fin and a lunate caudal fin.

*Lepidoperca filamenta* is morphologically closest to *L. pulchella* Waite, but differs from it in having a lower number of scales in upper transverse series (4 cf. 5), longer caudal fin (dorsal lobe 0.83-1.10 cf. 1.17-1.41 in HL), and a small dark blotch at the centre of anal and pectoral fins (cf. absent). In addition, modal differences are found in the following characters: pored lateral line scales (39-43 cf. 42-45), gill rakers on lower arch (24-27 cf. 26-30), bony orbit diameter (2.40-3.02 cf. 2.60-3.54 in HL), upper jaw length (2.18-2.43 cf. 2.28-2.54 in HL), longest anal soft ray (1.27-1.74 cf. 1.68-2.48 in HL) and pelvic fin length (2.88-3.38 cf. 3.18-3.88 in SL).

*Lepidoperca filamenta* differs from *L. occidentalis*, the only other species in the genus recorded from south-western Australia, by a lower number of tubed lateral line scales (39-43 cf. 44-48), greater body depth (2.29-2.58 cf. 3.18-3.95 in SL), spinous dorsal fin scaled basally (cf. naked), and a dark blotch extending between basal part of anterior 5-7 soft dorsal fin rays (cf. extending between tips of anterior 3 soft dorsal fin rays). Both species differ from others in the genus by having a lunate caudal fin.

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**References**

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